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HEALTH APPRAISAL OF SCHOOL CHILDREN IN A RURAL AREA

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When the Sierra County superintendent of schools requested assistance from the State Department of Public Health in determining the health status of the children in his schools, staff of the Department's Bureau of Maternal and Child Health saw this not only as an opportunity to help him gain the information he needed but as an opportunity to find out whether reported conclusions about health appraisal methods and findings based on studies of urban school populations would hold good for rural school populations.

County Description

Sierra County is in the Sierra Nevada Mountains north of Sacramento. It covers an area of 958 square miles but has only about 2400 residents, most of them living in the four largest towns. Almost 68 percent of the area is contained in the Tahoe National Forest and is owned by the Federal government. This greatly narrows the tax base in the county.

The local health department is one of those made possible for sparsely populated counties by contract with the State Department of Public Health. There is only one hospital in the county since the county hospital closed a few years ago.

For some time the county had had only two physicians, but shortly before this school health appraisal was carried out, a third physician established practice there.

Study Method

The local health department and the county school system participated in developing a method for obtaining the information the school superin-

tendent needed for planning the school health program. It was decided that individual health appraisals would be made of those children entering kindergarten and the first grade. Out of a total school population in the county of approximately 550, there were 112 children in this age group.

The decision was made to conduct individual health examinations in this rural area, even though studies in urban areas had shown these examinations to be comparatively non-productive. Yankauer's (5) studies in Rochester, New York, showed that periodic health examinations during the first four years of elementary school are of little value from a case-finding standpoint. These studies also showed that the majority (77 percent) of new adverse conditions neither known nor under care at the time of the periodic medical examination could have been discovered by means other than the performance of a medical examination.

Other studies conducted in urban areas have suggested better methods. Wright (4) concluded that "suitably modified questionnaires to be filled out by parents", coupled with "screening tests for vision and hearing and systematic superficial examinations" are more efficient than periodic health examinations.

The plan to evaluate the health of the 112 children included the use of a health inventory questionnaire in addition to a physical examination. The questionnaire used was a modification of one developed earlier by the State Health Department for use in other areas in the State. (3)

About ten days before the examination, the questionnaire was delivered in person by Parent-Teachers Association volunteers to the parents of the children who were to be examined. The PTA volunteers also made specific appointments for the mothers or fathers to bring their children in for the examination. In addition, a specimen bottle was left with the parents with instructions for obtaining a morning urine sample from the child.

Publicity for the health appraisal was provided by local newspapers, at PTA meetings, and by an explanatory letter to parents signed by the county superintendent of schools and the local health officer.

The examinations of the children were scheduled during the week before the schools opened in September, 1958. Registration for school was to be completed the same day for the convenience of the parents.

At the appointed time, the child and one or both of his parents (usually his mother) came to the school building where the child was to be registered for school, met his new teacher and principal, and then proceeded through a seven-stage health appraisal.

The first step was a review by a public health nurse for completeness of the health inventory questionnaire which the parents had been asked to answer. At this time she made any necessary additions to the questionnaire.

The second step was an audiometric examination. This was followed by an appraisal of visual acuity (third step). The vision examination was a departure from the usual vision

screening techniques used in California in that the Modified Clinical Technique (1) developed at the University of California was used.

Laboratory screening was the *fourth step*. The urine specimen was examined for protein and reducing substances and a screening hemoglobin test was also made, using the falling-drop copper sulfate method. The children were screened for hemoglobin levels at 9 and 11 grams.

The pediatric examination (*fifth step*) was done as carefully as possible, using the usual diagnostic equipment such as the otoscope, ophthalmoscope, sphygmomanometer, stethoscope, and reflex hammer.

The *sixth step* was the pediatrician's interview with the parent, reviewing and evaluating the physical findings, the information on the health inventory questionnaire, the findings of the vision and hearing screening procedures, and the results of the laboratory tests. The pediatrician explained to the parent, taking as much time as was needed, the findings of the health appraisal, and answered any of the parent's questions.

The *seventh and final step* of the appraisal was a conference between the parent and the public health nurse serving the school. This was valuable in affording an opportunity for the parent and nurse to meet each other, and also for providing the parent with another opportunity to ask questions and for the nurse to explain in more detail what the mother had been told during her child's examination. The nurse also used this time to find out parental attitudes toward the health appraisal and to gather other information about the family which might be of significance to the health department or the school.

At the end of each day, after all the parents and children had left, the teachers, school administrators, nurses, and physicians met to review the findings of the day and to discuss any of these findings or recommendations which might be of importance to the teachers.

Findings

All but one of the 112 children entering school, 56 boys and 55 girls, were examined. (This child was ill and was under the care of his family physician.) Of the examined children, 4 were four years of age, 57 were five years old, 46 were six, and 4 were seven years old.

The length of residence in the county reported by the parents ranged from three months to "life", and the average was 6.1 years. The average size of the families was 5.3 persons.

Previous Illnesses

Twenty-one children had histories of illnesses in which recurrence was considered possible and which, therefore, were thought to be of significance to the school health staff. Seventeen of these children had some type of allergic disorder, three had a history of convulsive disorder, and one had a congenital heart defect.

A history of tuberculosis contact was reported for only one child; thirty-one (27 percent) had had tuberculin skin tests, and twenty-six (23 percent) of these were known to be negative. Only eight children were stated to have had a chest x-ray; the results were unknown.

Thirty-two children (29 percent) had a past history of being hospitalized; four had been hospitalized more than once. The most frequent reason given for hospitalization was tonsillectomy. Four children were hospitalized for conditions resulting from accidents.

Immunizations

Eighty percent of the children had received their primary DPT immunization, but only about 32 percent had received booster immunizations. The 1956 child health survey in California (2) revealed that 85 percent of the children in the 5-6 year age group had received their primary DPT immunization, and 30 percent had received a booster immunization. In Sierra County, 68 percent of the children studied had had a primary vaccination for smallpox, and an additional 13 percent had been revaccinated. The California child health survey showed that 65 percent of the 5-6 year old group had had a primary vaccination and 7 percent had been revaccinated. Almost all (91 percent) of the Sierra children studied had had one or more injections of vaccine against poliomyelitis, although only 32 (29 percent) had received their third injection. Using the recommendations of the American Academy of Pediatrics regarding timing of the basic and booster immunizations, 18 children were judged to be in need of basic immunizations and 48 in need of booster immunizations.

Medical and Dental Care

Ninety-one (82 percent) of the children were said to have a personal

physician. The physician to half of these children lived in the county. About 5 percent of the children had physicians who lived across the border in Nevada, and about 30 percent of the children had physicians who lived in an adjoining California county. About 47 percent of the children examined had seen their physician for some reason within the preceding 8 months; about 68 percent had seen their physician during the 20 months preceding the school health appraisal. However, only 23 percent of those who indicated that they had a personal physician made regular visits to their physicians. Only 1.8 percent definitely indicated they had never been to a physician.

Fewer children had a personal dentist (43 percent) than had a personal physician. Twenty-one percent had a dentist who resided in the county. Thirty-four percent indicated that they had never been to a dentist.

Physical Defects

Ten of the 18 children who were without a personal physician were found to have some physical abnormality. These defects included visual and hearing disturbances, otitis media, flat feet; one child had a congenital defect of the maxilla.

Seventy-seven (70 percent) of the children were found to have a physical defect of some type. These 77 children had a total of 101 defects of which 38.6 percent were dental, 12.7 percent involved the eyes, 12.7 percent involved the feet, and 4.9 percent affected speech. Thirty-eight children (34 percent) were found to have a defect other than dental caries, and a total of 62 such defects were found in these 38 children.

Laboratory Findings

None of the urine examinations showed evidence of protein or reducing substance. All of the children except three, two boys, and a girl, had hemoglobin levels above 11 grams, and these three had more than 9 grams.

Health Inventory Information

Particular effort was used in developing the health inventory questionnaire, but its subsequent evaluation showed that, while it was helpful in gaining some information, it was misleading in certain instances. Using the questionnaire as a guide, one of the examining pediatricians and one of the assisting public health nurses attempted after the examinations had been completed to predict which chil-

children might need medical attention and for what reason. Their predictions were not very accurate as to specific abnormalities, but they were able to predict the majority of the children who were subsequently found to have some defect. Those children with defects who were not classified in the "suspect" group by the nurse or doctor had postural abnormalities, flat feet, or acute infections. Some also had visual or auditory abnormalities, which were only discovered during the vision and hearing screening tests.

Parent Attitude

Some questions were asked at the end of the examination in an attempt to evaluate the impact of the health appraisal on the parents. Most of the mothers felt that the entire appraisal was most helpful, 35 expressed the feeling that the most outstanding feature was the thoroughness of the examination. Twenty-seven thought the pediatrician's examination was the most outstanding part, while another 27 thought that the eye examination was most valuable.

The most frequently unsuspected findings which were revealed to the parents by the examination were abnormalities of the eyes.

Thirty-six mothers indicated that the most valuable part of the procedure to them was the assurance they received that their children were healthy. Twenty-two praised the detailed explanations they received.

Only five indicated that there was nothing about the health appraisal that was of particular importance to them. Another fifteen did not feel that they gained any better understanding of their child's health as a result of the examination.

The parents made a number of suggestions for improving the mechanics of the health appraisal. Some suggested that the parents should be told in advance about the amount of time involved (about two hours per child). Other mothers felt that more questions should be asked on the questionnaire regarding emotional problems, rest habits, and vitamins. Still others suggested a shorter form and a less complicated way for obtaining immunization history.

Follow-up

Parents of 59 (53 percent) of the 111 children were given recommendations to seek additional care for their children: 36 for dental care, 11 for

eye follow-up, seven for further evaluations of a possible speech or hearing abnormality, two for psychological testing, two for orthopedic problems, and one for follow-up of a heart murmur. The other 18 children noted to have defects were already under care.

Fifteen months after the health appraisal was done, public health nurses summarized the actions taken by the parents of the 59 children given recommendation for further professional follow-up care. Of these, half needed specific treatment or continued follow-up, and the remainder were judged to be in need of no additional attention. On recheck of vision and hearing acuity only five of the children were judged to need further attention. The child with the heart murmur was also found to be normal on recheck. Five of the children given referral recommendations were "lost", having moved from the county. The remainder of the children, all of whom were given recommendations for dental care, had not sought the care recommended.

Conclusions

The findings of this study suggest that routine health examinations performed on entrance to school by school physicians reveal little new information regarding the health status of children which could not be obtained by other less time consuming and expensive methods.

However, vision and hearing screening procedures were found to be productive and would still be necessary.

These findings are consistent with those obtained from the studies of urban school populations cited earlier in this paper.

Desired information regarding the health of school children can probably be obtained more efficiently by using carefully prepared questionnaires which parents are asked to complete. Information from such questionnaires, combined with the results of vision and hearing screening, general inspections performed by school nurse, and teacher observation should provide the necessary basis for identifying children needing additional professional follow-up care. These suggested procedures should also supply information needed for planning a school health program and for identifying those children who might need special planning for their educational program.

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EPIDEMIOLOGIC NOTES

Influenza

The annual influenza surveillance program of the California State Department of Public Health got underway again this month, with the eight local health department "listening posts" participating in the reporting of school absenteeism and any unusual accumulation of respiratory disease.

Other indices used by the Department to measure incidence of respiratory diseases include absenteeism in selected industries, laboratory requests for influenza testing, and bed occupancy in selected hospitals.

If past experience can be used as a guide, no major influenza epidemics are anticipated this year. A extensive epidemic of Influenza type A occurred last season, predominantly in January and February. In the past, major epidemics have tended to recur only every second or third year, although some increase in influenza morbidity can be expected every winter.

Paralytic Poliomyelitis

The reported incidence of paralytic polio continues to show the seasonally expected decline. The highest number of cases reported for any one week in 1960 was 25. These cases were reported during the week ending August 20.

As of November 19 the cases reported weekly have been substantially lower than in the corresponding week for the five-year median. The total number of cases reported since January 1 number 351 as compared to 374 for the same period a year ago.

The San Francisco Bay area had fewer paralytic polio cases this year than last, the Central Valley remained about the same, and the Los Angeles area showed an increase.

Of the cases analyzed so far, 55 percent had not had any vaccine at all and an additional 24 percent had less than the recommended three doses. This means that almost 80 percent of paralytic cases had not had the required course of immunization.

The age distribution has remained relatively constant over the last few years. Of the cases analyzed this year, 41 percent have occurred in children five years old and under and 23 percent in children from five to nine, totaling 64 percent in children under the age of 10.

A total of 21 deaths from polio have been reported thus far. Six of these

were in children under five and 15 were in persons over the age of 18.

Arthropod-Borne Encephalitis

This has been a relatively low-incidence year for arthropod-borne encephalitis, with a total of 13 cases confirmed by laboratory test. Twelve were St. Louis encephalitis and one Western encephalitis.

Only twice in the past 15 years, in 1948 and in 1955, have fewer than 13 cases been reported. This year's cases have occurred in the endemic areas of the state: Imperial Valley, 3 cases; Sacramento Valley, 3 cases; and San Joaquin Valley, 7 cases. The only concentration of cases occurred in the vicinity of Fresno between late August and mid-September. Out of eight suspected cases, five were proved by laboratory tests to be St. Louis encephalitis.

The mosquito population throughout the year was at its lowest level of the last five years, conforming to the low incidence of encephalitis.

BOUQUET

Whereas the American Public Health Association at its 88th Annual Meeting in San Francisco on November 3, 1960, honored the California State Department of Public Health, its Chronic Disease Control Program and the leader of the program, Dr. Lester Breslow, by awarding them an Albert Lasker Group Award in Public Health for pioneering the concept that the prevention and control of chronic disease should be a matter of public health concern;

Be it resolved that the members of the teaching faculty of the School of Social Welfare, University of California, Berkeley express their pride in and satisfaction with this well-deserved national recognition and honor paid to our sister state institution and to a colleague whose work all of us admire and who is personally affectionately known by many of us.

There are 45,000 registered drug addicts in the United States and an undetermined number of victims of the dope habit are not yet registered. —*Science News Letter*, October 22, 1960.

Herbert Bauer, M.D., Elected President of CCLHO



Herbert Bauer, M.D.

Herbert Bauer, M.D., Yolo County Health Officer, was elected president of the California Conference of Local Health Officers for 1960-1961 at the semi-annual meeting in Oakland in November. He succeeds Everett M. Stone, M.D., Riverside County Health Officer. The new vice-president is Dwight Bissell, M.D., San Jose City Health Officer, who was secretary last year. The new secretary is Robert S. Westphal, M.D., Stanislaus County Health Officer.

All local health officers in California are members of the conference, which was created by the Legislature in 1947 under the Public Health Assistance Act. They meet twice each year for the purpose of considering public health policies and integrating State and local public health activities. Throughout the rest of the year the work of the conference is carried on by committees.

A majority of the forty-six full time health officers in California attended the November meeting. A partial list of action taken follows.

The Conference—

- Made recommendations as to the educational requirements for school nurses.
- Urged legislation to provide conspicuous, legible warnings on plastic bags, and to specify an enforcing agency.

- Strongly endorsed a proposed traffic safety program as presented by the State Department of Public Health.
- Announced that a pilot institute on occupational health for a limited number of health officers will be held early in March 1961, to be financed by the United States Public Health Service.
- Recommended an increase in State funds for allocation to local health departments under the Public Health Assistance Act.
- Approved a recommendation that local health departments provide a planned and organized public health social work program under the direction of the health officer.
- Endorsed a study of problems connected with the recruitment of public health laboratory personnel.
- Recommended joint certification of registered sanitarians and milk inspectors.
- Endorsed the institute on public health and behavioral sciences planned for early 1961 under the joint auspices of the American Public Health Association, Western Branch, and the University of California Schools of Public Health.
- Endorsed a proposed facility for conducting research in environmental health.
- Opposed the recommendations of the Citizens Advisory Commission regarding amendments to Section 7604 of the Education Code to delete the subject of health as a prescribed course, and asked that the resolution be sent to appropriate agencies and persons interested in strengthening the health instruction program in the schools.
- Approved and adopted the following guides:
 - Guide for Public Health Action in Problem Drinking*
 - Guide to a Dental Health Program*
 - A Guide for Social Services to Meet the Needs of Uncooperative Tuberculous Patients*
 - Revised Laboratory Section of Community-Wide Objectives and Program Practices of Local Health Departments*
- Proposed to the State Director of Public Health a research project

State Hospital Advisory Board Members Reappointed

Governor Edmund G. Brown has announced the reappointments of David W. Lawrence of Long Beach and Louis Peelyon of El Cajon to the Hospital Advisory Board. The terms are for four years.

Mr. Lawrence was appointed last year to fill the vacancy left by the death of Dr. Lawrence B. O'Meara. He has been administrator of the Long Beach Osteopathic Hospital since it opened in 1946 and is president of the National Osteopathic Hospital Association.

Mr. Peelyon is beginning his second four-year term on the board. He has been a hospital administrator since 1946, with posts in Los Angeles, Lompoc, Brawley, and San Diego. He served as a hospital corps administrative officer during World War II. Since 1954 he has been administrator of the Grossmont Hospital District. He is a trustee of the California Hospital Association.

Members of the Hospital Advisory Board act in an advisory capacity to the State Department of Public Health in matters relating to the licensing of hospitals and nursing homes.

Comprehensive Text Prepared On Accident Prevention

Written primarily for public health workers and physicians, a basic text of 21 chapters covering all phases of accident prevention has been prepared by the American Public Health Association for 1961 publication. The new volume, entitled "Role of Physicians and Public Health Workers in Accident Prevention," has been developed by the Program Area Committee on Accident Prevention of APHA, with the cooperation of leading medical, health and safety agencies.

Publication in 1961 will depend on whether enough pre-publication orders are received so that the publisher can be furnished tangible evidence of a demand for the text. The anticipated price is \$12 to \$14, with a substantial savings indicated for those who place pre-publication orders with the APHA, 1790 Broadway, New York 19.

to collect and assemble information to be incorporated in a guide for new health officers.

PROGRAM BRIEFS

Student Nurses Oriented to Public Health

Students from every nursing training institution in the Los Angeles area are being brought together for an intensive orientation to public health, in what is believed to be the first attempt of its kind in the nation. A three session annual series has been planned by the participating schools of nursing, the Los Angeles City Health Department, and the Visiting Nurse Association of Los Angeles. According to George M. Uhl, M.D., Los Angeles Health Officer, nurses must have knowledge and understanding of community health problems and must be aware of resources for dealing with these problems. This educational series will attempt to bring some of this needed information to student nurses who, at this point, have had most of their experience in a hospital setting. (News Release, L.A. City Health Dept., Nov. 17.)

Insurance Agents Spread Health Information

A new approach to face-to-face health education carried out in San Diego was given recognition by the National Association of Life Underwriters and the Institute of Life Insurance recently because "it showed originality and was the first of its kind in the nation". For a year, insurance agents from the San Diego Association of Life Underwriters spent a few minutes talking with clients about ways of protecting their health and then left a pamphlet with them. The agents discussed paralytic polio vaccinations; rabies vaccinations for dogs; home safety; early warning signs of tuberculosis, cancer and heart disease; and food sanitation. More than 2,000 persons said the visits were of real help.

The program was carried out in cooperation with the Bureau of Public Health Education. San Diego Department of Public Health. (San Diego's Health, 1959-60 Annual Report.)

"Sitters" for the Handicapped

Marin County parents of the handicapped may soon have available the same "sitter" services as that available to parents of normal children. Robert E. Foster of Mill Valley, a teacher of the cerebral palsied at Sonoma State Hospital, Sonoma, has already given special training to one group of interested teen-agers. Be-

cause of the success of the project a broader instructional program is now being planned to provide information and experience in physical therapy, nursing, occupational therapy, and child welfare.

In addition to serving their community by "sitting" with handicapped children, these teen-agers are gaining valuable experience and encouragement to enter one of the professions allied with care of the handicapped. (*California Medical Health Progress*, June 1960.)

Personals

Edwin W. Jackson, M.D., left the State Department of Public Health in November for a two-year leave of absence. After five months orientation in Washington, D.C., Dr. Jackson will proceed to Lima, Peru, as medical officer with the United States International Cooperation Administration. Dr. Jackson has been employed as medical officer with the Bureau of Communicable Diseases, and also spent his public health residency in the Department.

Jessie M. Bierman, M.D., professor of maternal and child health in the School of Public Health, University of California at Berkeley, received a Montana State University Alumni Distinguished Service Award this fall for her world-wide work in maternal and child health. She served for a year as chief of the World Health Organization's Section of Maternal and Child Health, and has held the position of chief, Bureau of Maternal and Child Health, California State Department of Public Health. An interesting side-light to the presentation of her award is the fact that a former pediatric patient, Jack Daniels, was given the same award on the same program—his for international fame in sports gained in the pentathlon events in the 1956 and 1960 Olympics.

Mrs. Anita Wiggins has been appointed Chief of Nursing, Medical and Health Division, California Disaster Office. Prior to the appointment, she was director of public health nursing at the Monterey County Health Department where she developed a field training civil defense exercise that has become a model throughout the State.

School Vision Screening Project Reported

The Contra Costa County Health Department works with the county school system to help the community and the school districts to a better understanding of the health needs of children. Part of this effort is helping the school districts to provide a more satisfactory procedure for carrying out vision screening as required by the California Education Code (#11903).

As a result of the success of the vision screening study* carried out in Orinda in 1959 by the Contra Costa County Health Department, the University of California School of Optometry, and the Stanford University School of Medicine, the Contra Costa County school system has adopted the Modified Clinical Technique developed in that study.

During 1959-60 the Contra Costa Board of Education provided funds for testing (screening) by this technique the vision of all first grade pupils, some kindergarten pupils, and pupils newly transferred to the schools of the county. Each of the 23 school districts with elementary students participated in the screening.

The results have just been summarized and leave no doubt that the Modified Clinical Technique identified many eye defects which would have gone undetected by the previously used Snellen acuity and plus sphere procedures.

Of the 12,846 pupils tested, 9,074 were first graders, 641 were kindergarten pupils, and 3,131 were transfer students.

No students wearing glasses or having known eye defects were tested.

Sixteen percent, or 2,030 of the pupils tested, were found to have defects significant enough to indicate referral for specialist attention.

Forty-three percent of these had information returned from the eye specialist involved.

Of those returned, 89 percent of the patients were considered "correct referrals" in that glasses (or other treatment) were recommended or that repeated future evaluation was required.

For this next year, 1960-61, all but five of the school districts plan to con-

Nominations Sought For Koshland Award

Annually the California Association for Health and Welfare honors a social work executive and a social work practitioner for their contributions to social work in California. This is done through the Koshland Award, presented in honor of Daniel E. Koshland.

The awards will be made in April, 1961 at the annual meeting of the association. Each awardee will receive a certificate and a check for \$200.

According to Newton R. Holcomb, Santa Clara County Welfare Director and chairman of the award committee, the deadline for receiving nominations is January 28, 1961. An earlier submission date is desirable, however, since it is frequently necessary to secure more information than provided in the nominations to fully appraise the contributions of the candidates.

Anyone is free to submit a nomination, which must include the nature of the contribution, what was accomplished, and why the contribution was outstanding. Nominations should be mailed to the California Association for Health and Welfare, 942 Market Street, San Francisco.

tract with the county schools for the same service and will pay the full cost (55 cents per student).

The Orinda Vision Study confirmed the opinion that hyperopia will not ordinarily improve as the child grows older, and that the major change after entry into school is myopia, although allergy, infection, and injury are not rare developments.

It has been shown that this type of testing, Modified Clinical Technique, needs to be done only once during school age. It is recommended that children be screened throughout the rest of their school years by the traditional Snellen testing for developing myopia, and by teacher-nurse observation of visual distress. This will assist in identifying developing myopia and some of the other developing problems.

This screening is in no way intended to eliminate the need for interest and responsibility on the part of the parents or the child's usual source of medical care.

Preliminary reports of these studies are available from Contra Costa County Health Department.

* Blum, H. L., Peters, H. B., and Bettman, J. W., *Vision Screening for Elementary Schools—The Orinda Study*. University of California Press, 1959.

Wringer Injuries Analyzed At L.A. County Hospital

Statistical studies analyzing home accidents place falls, slips, burns, and ingestions high on the list of those leading to injury or death, but few of them give the wringer washing machine the recognition it deserves as a home hazard.

Data from Ward 3300, a children's orthopedic ward of the Los Angeles County General Hospital, were analyzed for the period from January 15 to July 31, 1960. Out of the total of 265 injury cases, 56, or 21.1 percent, were wringer injuries. More than half of the cases were boys, and the children's ages ranged from 18 months to 13 years. Twenty-seven percent of these children required skin grafts to repair the damage. Prompt treatment with splints and compression bandages are usually needed to prevent permanent crippling or loss of an arm.

The Bureau of Public Health Nursing of the Los Angeles County Health Department and the Department of Nursing Services of the Los Angeles County General Hospital cooperated in a further analysis of home accidents admitted to Ward 3300 during the seven-week period from August 1 to September 15, 1960. There were 52 such admissions, and nine of these, or 25 percent, were wringer injury cases—the youngest a boy of 15 months.

Their analysis showed that this type of injury occurs more often among non-Caucasian racial groups, in large families living in congested areas with inadequate housing, where several families may cooperate in renting a washing machine for a dollar a day.

Since the simple act of releasing the wringer spring when the machine is untended could prevent injury, it is plain that education in the safe operation of this type of equipment is badly needed.

California still leads the world in membership of Alcoholics Anonymous according to that organization's 1960 World Directory.

California is listed as having 15,483 members, in more groups than any other state. The number of groups in the United States is listed as 5,719, with an estimated total membership of 101,724. Worldwide membership has increased from 145,830 to 151,606.

Rabies Reported in Bats; Monkeys Tested

Twelve cases of rabies in bats have been recognized in California since January 1, 1960. This makes a total of 47 such cases proved in the State since July of 1945.

The cases this year were reported from the counties of Tulare, Mendocino, Nevada, Madera, Lassen, Riverside, Modoc, San Joaquin, Yolo, Tuolumne, and Sacramento.

Although there has never been a case of rabies found in monkeys in California, the Los Angeles City Health Department reports receiving 15 dead monkeys in the first three weeks of November for rabies determination. The greatly increased number of tests requested is apparently due to an own-your-own-monkey fad which has developed in Los Angeles.

There has been an abrupt rise in the number of people being bitten by a pet monkey which shortly thereafter dies. None of the monkeys tested as of November 21, 1960, was found to be rabid. However, the possibility of rabies infection in monkeys cannot be ignored, since many of them have been brought by air from the jungles of South America where rabies in bats is very prevalent and exposure of monkeys in their native habitat to these bats is quite possible.

Nutrition During Pregnancy And Lactation

A revised issue of the California State Department of Public Health booklet *Nutrition During Pregnancy and Lactation* is now available to professional health workers on request. Contents are based on recommendations of physicians, nutritionists, dietitians, nurses, and others in the field of prenatal care. The booklet includes recommended nutrient needs, basic diet plans, sample menus, ways to reduce the cost of the adequate prenatal diet, patient education methods, and a suggested reference list of educational materials.

This publication serves as a supplement to the new Departmental publication, *Standards and Recommendations for Public Prenatal Care*, which was reviewed in the December 1 issue. Requests from persons in the health professions for copies of either publication should be directed to their local health departments.

Public Health Positions

Los Angeles County

Public Health Microbiologist: Salary range, \$464-\$545. California State Public Health Microbiologist Certificate required at time of employment. Apply to the County of Los Angeles Civil Service Commission, 222 N. Grand, Rm. 493, Los Angeles 12, California.

San Diego County

Chief, Bureau of Maternal and Child Health: Salary range, around \$1052-\$1160, plus 10 percent if certified by American Board of Preventive Medicine and Public Health or of Pediatrics. To have administrative responsibility for the maternal and child health program of the department of public health. Duties include organizing and directing the activities of physicians, dentists, and a nutritionist who render services at maternal and child health clinics and to county school children. Requirements include graduation from medical school, one year of general rotating internship at an accredited hospital, and within the last ten years, at least four years professional experience or residency training in public health and/or pediatrics. The foregoing must include one year with a recognized public health agency in a full-time position carrying administrative responsibility in the field of maternal-child health; and either an additional year of experience with a public health agency or a master's degree in public health. Must be licensed to practice medicine in California by time of appointment.

Chief, Division of Preventive Medicine: Salary range, around \$1218-\$1343, about 10 percent higher if certified by American Board of Preventive Medicine and Public Health. To have administrative responsibility for organizing and directing the activities of the bureaus of tuberculosis, venereal disease, acute communicable disease, school health, maternal and child health, and public health nursing. Must be currently certified by American Board of Preventive Medicine and Public Health or be eligible to take next Board examination. Of the experience required for Board eligibility, at least two years must have been in a supervisory capacity with a recognized public health agency, including one year of experience supervising a broad public health program in a recognized local public health agency. Must be licensed to practice medicine in California.

Applicants for either position should submit a typewritten statement in duplicate outlining training, experience, and interest in the field of public health, to the Department of Civil Service and Personnel, Room 403, Civic Center, San Diego, California.

Alcoholic Rehabilitation Worker I: Salary range, around \$532-\$587. Functions as a member of a clinical team in the diagnosis and treatment of out-patients at the alcoholic rehabilitation clinic. This clinic is under the administrative direction of the department of public health and includes the services of a consulting psychiatrist, a physician, three social workers, a clinical psychologist, a public health nurse, and clerical assistants. Requirements include a master's degree in medical or psychiatric social work, or a master's degree in social work and one year of subsequent supervised experience in alcoholic rehabilitation casework or in psychiatric or medical social work. Apply to Department of Civil Service and Personnel, Room 403, Civic Center, San Diego, California.

Two Special PKU Surveys Done Recently

Two special surveys of the incidence of phenylketonuria (PKU) have recently been completed in California, and the results are summarized here.

Mental deterioration due to phenylketonuria, congenital inability to metabolize the amino acid phenylalanine, is preventable if diagnosis is made early and the child is placed on a low phenylalanine diet.

Since 1957 the California State Department of Public Health has cooperated with the College of Medical Evangelists in studying this disorder. As a result, a reliable inexpensive diaper test has been developed for early detection of the disease, which develops within six weeks after birth.

Although phenylketonuria has been known as a medical entity for almost 30 years, treatment aimed at preventing the neurologic sequelae of the disease is quite recent, and the first large-scale screening programs in the country were instituted in California.

The problem now is to identify children with this disease early enough to institute the necessary low phenylalanine diet before damage occurs. This early identification can more easily be done in families where a previous child with the disease has already been diagnosed, but identification is not so easily accomplished in families where the hereditary pattern has not yet been recognized.

In California, routine testing for PKU is now being done in the State hospitals for the mentally retarded and in the well-baby clinic programs carried on by local health departments.

The two special surveys recently completed were done in addition to this routine testing.

Training Class Survey

In one of these surveys, tests were run on retarded children in training classes sponsored by parent groups in various parts of the state. Nineteen parent groups cooperated in the testing and 991 children were tested. The incidence of phenylketonuria in this group of children was 1.1 percent. Five previously unidentified cases were discovered. There were six previously diagnosed cases in the groups, bringing the total in this selected population to eleven, an incidence of 1.1 percent.

County Survey

The other special survey was a unique pilot study for detection of phenylketonuria among the mentally retarded children in the public and private schools of a whole county. The study was conducted in San Diego County by the Bureau of Special Education, State Department of Education, and co-sponsored by the San Diego Department of Public Health, the College of Medical Evangelists, and the local schools. Public health officials, public and private school administrators, nurses and teachers responded to the request for cooperation in the study.

Children in special schools and classes for the mentally retarded, cerebral palsied children with IQs under 80, and the mentally retarded in private programs were included. Of the 3,238 such individuals in San Diego County, 81.9 percent (2,721) were tested. Four previously undiagnosed cases were discovered. There were two previously known cases, bringing the total in the county to six, an incidence of 0.2 percent.

Although the disease is rare in the general population—an estimated one in 25,000 babies—one percent of the institutionalized mentally retarded patients in California are phenylketonurics.

The studies clearly indicate the need to continue the quest for identification of children with this disease, so that early diagnosis will be possible in affected siblings yet to be born to these families and dietary management can be started before neurologic damage takes place.

Dietary Project

Through a grant from the U.S. Children's Bureau, a PKU dietary project was begun early this year at the Children's Hospital of Los Angeles under sponsorship of the State Department of Public Health. Under this project, the necessary but expensive low phenylalanine diet is provided for phenylketonuric children whose parents cannot afford the added expense of the special diet. At present, 20 such children are on dietary management through this project.

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